56-06

U. S. DEPARTMENT OF AGRICULTURE - FOREST SERVICE
CALIFORNIA FOREST AND RANGE EXPERIMENT STATION
Division of Forest Insect Research

FOREST INSECT CONDITIONS
FOREST RECREATIONAL AREAS - SOUTHERN CALIFORNIA
OCTOBER--NOVEMBER 1956
APPRAISAL SURVEY

The period of October 28 to November 4, 1956, was spent by Ralph C. Hall of the California Forest and Range Experiment Station and James L. Averell of the Regional Office in an inspection of some of the more important forest insect problems on the Los Padres, Angeles and San Bernardino National Forests. George F. Roskie from the Supervisor's Office, Thomas A. Neff, Ranger; and Joseph Miller of the Mt. Pinos District participated in the inspection of the Mt. Pinos District on the Los Padres; George W. Armstrong of the Supervisor's Office and Ranger Charles C. Beardsley participated in the inspection of the Valyermo District on the Angeles National Forest; Charles A. Yates of the Supervisor's Office participated in the inspection of the Arrowhead-Crestline area; Ranger O. L. Holmes of the San Gorgonio District and David M. Tucker from the Supervisor's Office participated in the inspection of the Camp Angeles and Barton Flat areas; and Ranger John C. Gilman of the San Jacinto District and Paul Sischo of the California State Division of Forestry participated in the inspection of the San Jacinto District. On November 26, B. E. Wickman of the Station, accompanied by Ken Cresswell of the Kern County Forestry & Fire Dept. and Joel Miller from the Mt. Pinos District, made an appraisal of the Mill Potrero infestation.

Los Padres National Forest, Mt. Pinos District

There are several important current insect problems on the Mt. Pinos District. These include heavy infestations of the California flatheaded borer and the red turpentine beetle in Jeffrey pine on the two burns on Frazier Mountain and in the Mill Potrero areas. Losses are highly epidemic outside the burned area in Mill Potrero, epidemic in the Y.M.C.A. organizational camp area, the portion of the Grade Valley not covered by sanitation salvage, and on Alamo Mountain.

Frazier Mt. and Mill Potrero Burn

Several hundred Jeffrey pine trees injured by fire are currently infested by the California flatheaded borer and red turpentine beetle on both these burns. The Frazier Mountain fire occurred in early August, and the Mill Potrero in late July. In the latter area losses are epidemic outside the burned area. Most of the infested trees are merchantable and have possibilities for salvage. There are approximately 50 fire-scorched or killed trees over 30" in diameter near the road which could be salvaged. The ownership on both these burns is Forest Service.

Mill Potrero

Epidemic losses in Jeffrey pine, caused by a combination of pine engraver and California flatheaded borer attacks, occur in this area. The infestation is located in parts of Sections 19 and 30, T9N, R21W, and is principally on private

property of one ownership with a small area on the Los Padres National Forest. The Jeffrey pine stand is cutover and the trees are being top-killed by Ips sp. Many trees have been totally killed by Melanophila californica (California flatheaded borer). The insects appear to be killing the trees by concurrent attacks. Flatheaded borer brood was found in the larval stage.

The following is an estimate of the damage to date:

	No. Trees	Acres	Trees per acre
1956 infested trees	270	110	2.4

The dead trees vary from 6" to 34" in diameter, with an average diameter of about 16". Most of the infestation occurs on Kern County Land Company property' however, one area of 20 acres with approximately 50 dead trees is on the Los Padres National Forest. Currently infested trees are beginning to fade and will become more noticeable in several months.

The infestation appears to have started early in 1956, and may continue to kill the remaining green stand of Jeffrey pine in the area. There is a fairly extensive Jeffrey pine stand to the west and south of the infestation on the Los Padres National Forest which is threatened if the infestation continues unabated.

There are a number of trees over 24" diameter which are suitable for salvage logging, and the area is accessible. The smaller trees could be treated by falling, bucking and spraying with EDB.

Y.M.C.A. Camp Area

Losses in Jeffrey pine by the California flatheaded borer in the organizational camp area are continuing at a high level.

Grade Valley

About one half of the Grade Valley area has been cut on a sanitation-salvage basis, but the balance of the area has been marked for cutting and the sale made. Maintenance control was carried on last spring on the treated area. Only an occasional infested tree was observed on this area, but on the uncut area heavy losses were observed. It was interesting to note that practically all of the loss in the uncut area was in high-risk trees marked for cutting.

Alamo Mountain

A sample of the risk marking on about 160 acres on Alamo Mountain was checked and recent damage visually appraised. Damage is continuing at a high level in the areas observed. An inspection was also made of a small sample area in which the risk III and IV trees had been marked by Hall about one year ago. All of the losses in the particular area were confined to those trees rated as risk IV, except for one tree which had been rated risk III.

Discussion

Indications are that unless control measures are taken on the Frazier Mountain and Mill Potrero burns additional losses in adjacent green timber can be expected. It would appear that the most satisfactory solution to the above problem would be the prompt salvage of the fire-killed timber on both these burns, followed by treatment of the unmerchantable infested trees with insecticide. Ethylene dibromide is suitable for this purpose. Control measures should also be considered for the Mill Potrero infestation outside of the burn. The survey showed that practically all of the 1956 infestation is on private land. If control is undertaken, it is suggested that the project follow the general pattern of the State State providing 50% of the cost and the private and Federal Government 25% each. Maintenance control is suggested for the organizational camp areas in the Mt. Pinos District. The possibilities of the salvage of merchantable infested trees should be fully explored before other control measures are attempted.

Maintenance control should be continued in that portion of Grade Valley where sanitation-salvage operations have been completed.

Additional checking should be made of the marking on Alamo Mountain to be sure that only high-risk trees are marked.

Angeles National Forest, Big Pines Sanitation-Salvage Area

The sanitation-salvage operation in the Big Pines area has been completed. Practically all of the treated area amounting to about 6,000 acres, was examined and insect damage found to be very light. In the course of the examination, approximately 15 infested trees were observed. Of this number, about one half were pole-size trees infested with pine engravers. The balance of merchantable size were top-killed by engravers and a few infested in the basal portion with flatheads. Three of the merchantable trees were those marked as risk IV, but because they were in very high-use picnic areas, they were not removed in cutting.

Discussion

Now that this area has been treated with sanitation salvage and a good system of roads developed, it is suggested that maintenance control be undertaken this winter. Since a good road system now exists, it should be possible to salvage practically all of the infested merchantable trees.

San Bernardino National Forest

Arrowhead-Crestline Area.--Indications are that insect losses in the area will exceed those for the last season. One reason for the increase is the prevalence of numerous trees seriously injured by needle dieback. Many of these trees are now being attacked by tree-killing bark beetles which greatly adds to the problem of control. Until the cause of this damage is determined, there is little that can be done to correct it.

The Tunnel Two sanitation-salvage area treated two years ago was examined, and not a single infested tree was observed.

The large McKinley burn of late September on the Arrowhead District was examined for insect attack, but no attacks were found. Plans are underway to salvage the dead and dying trees on this burn, and it is not expected that this area will create any immediate insect problem. It is suggested that the burned area be carefully watched next season for any unusual insect activity. Maintenance control is progressing in a satisfactory manner, and it is anticipated that sufficient cooperative funds are available to complete the job.

San Gorgonio District.--The Barton Flats sanitation-salvage area was examined, but no currently infested trees were observed. During the past season 87 trees were spotted on 5,500 acres. Of this number 73, or 84%, were salvaged while still infested and the balance of the 14 were treated by spraying with EDB. The loss on a per-acre basis was about 12 board-feet for 1955 and about 15 board-feet in 1956. These losses following sanitation-salvage logging represents over a 90% reduction annually in loss following treatment, as compared with losses prior to treatment.

The Camp Angeles sanitation-salvage area was also examined. Cutting was completed in this area during the early summer. No infested trees have shown up since treatment. A chipper was used to eliminate the slash problem in most of the area. It is suggested that chipping be substituted for piling and burning in all future sanitation-salvage operations in recreational areas because of the hazard of pine-engraver buildup in piled slash.

San Jacinto District.--Considerable grouping tendencies of infested ponderosa and Coulter pine were observed in the San Jacinto area. The western pine beetle is the insect responsible for the damage, assisted in some cases by the five-spined engraver beetle top-killing the trees. Indications are that the 1956 losses will exceed those for the 1955 season.

Discussion

For the past several years the Arrowhead-Crestline cooperative insect control project has been conducted on a year-round maintenance basis with very gratifying results. Since much of the loss in the San Jacinto area is caused by the same insects as those in the Arrowhead-Crestline area, it is suggested that consideration be given to putting the San Jacinto project on a year-round maintenance basis as soon as possible.

Also, consideration should be given to the possibility of treating some of the more remote recreational areas by sanitation salvage in order to reduce the annual cost of direct control. This method has been successful elsewhere, for example, Barton Flats where before sanitation-salvage cutting the annual cost was between $12,000 and $20,000. By contrast, in 1956, two years after sanitation salvage was completed the total outlay for direct control in the same area was about $250., with losses reduced to a very low level of 15 board-feet per acre. It is believed that much the same thing can be accomplished in most of the San Jacinto area.

Berkeley, California
December 5, 1956

Ralph C. Hall 1
and
Boyd E. Wickman
Entomologists